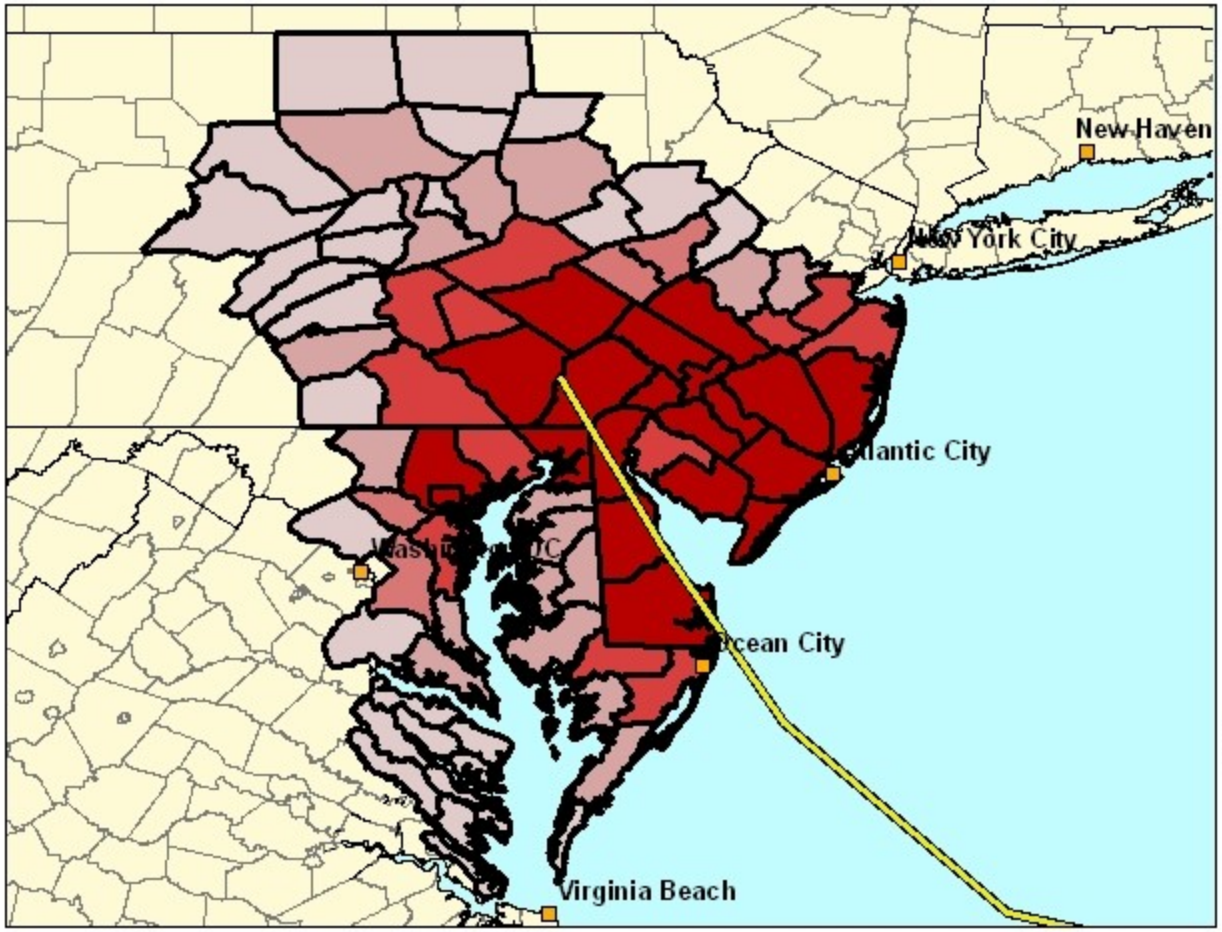
US Army Corps of Engineers

Hurricane De#1 Debris Model

Landfall Plus About 12 Hours

For Official Use Only!



Post Landfall Debris Model Results

Pennsylvania - 22,950,000 Yards
New Jersey - 17,676,000 Yards
Delaware - 10,815,000 Yards
Maryland - 9,177,000 Yards
Virginia - 458,000 Yards

Model results per County on following page

This model is based on a Category 3 storm making landfall in Delaware Bay area.

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 3 storm making landfall in Delaware Bay area. These projections are based on information from the NHC (1000 EDT 09/16/2007) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Debris Model	
Generated By: Siemsen, LRL 1030 EDT 09/16/2007	
Sources: HURREVAC LRL-DEBRIS	

US Army Corps of Engineers

Hurricane De#1 Debris Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Yards per State	County	Yards per County
Delaware		Kent	1,891,000
		New Castle	6,441,000
		Sussex	2,483,000
Delaware	10,815,000		
Maryland		Anne Arundel	743,000
		Baltimore	1,658,000
		Baltimore City	1,075,000
		Calvert	109,000
		Caroline	237,000
		Carroll	116,000
		Cecil	1,052,000
		Charles	27,000
		Dorchester	141,000
		Harford	941,000
		Howard	338,000
		Kent	141,000
		Montgomery	< 1,000
		Prince Georges	401,000
		Queen Annes	190,000
		Somerset	153,000
		St Marys	123,000
		Talbot	111,000
		Wicomico	771,000
		Worcester	850,000
Maryland	9,177,000		
New Jersey		Atlantic	2,549,000
		Burlington	1,293,000
		Camden	3,917,000
		Cape May	1,467,000

State	Yards per State	County	Yards per County
New Jersey		Cumberland	1,318,000
(continued)		Gloucester	2,422,000
		Hunterdon	132,000
		Mercer	781,000
		Middlesex	531,000
		Monmouth	802,000
		Ocean	1,545,000
		Salem	674,000
		Somerset	195,000
		Warren	50,000
New Jersey	17,676,000		
Pennsylvania		Adams	56,000
		Berks	2,314,000
		Bradford	4,000
		Bucks	1,166,000
		Carbon	68,000
		Centre	2,000
		Chester	2,825,000
		Clinton	2,000
		Columbia	109,000
		Cumberland	209,000
		Dauphin	532,000
		Delaware	3,462,000
		Juniata	11,000
		Lancaster	2,894,000
		Lebanon	777,000
		Lehigh	486,000
		Luzerne	145,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane De#1 Debris Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Debris Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Yards per State	County	Yards per County
Pennsylvania		Lycoming	141,000
(continued)		Mifflin	< 1,000
		Monroe	16,000
		Montgomery	1,539,000
		Montour	33,000
		Northampton	260,000
		Northumberland	174,000
		Perry	43,000
		Philadelphia	4,276,000
		Schuylkil	508,000
		Snyder	50,000
		Sullivan	10,000
		Tioga	< 1,000
		Union	36,000
		Wyoming	< 1,000
		York	802,000
Pennsylvania	22,950,000		
Virginia		Accomack	247,000
		Essex	2,000
		Gloucester	49,000
		Hampton City	15,000
		King And Queen	3,000
		Lancaster	16,000
		Mathews	14,000
		Middlesex	16,000
		Northampton	26,000
		Northumberland	24,000
		Poquoson City	11,000
		Richmond	9,000
		Westmoreland	12,000

State	Yards per State	County	Yards per County
Virginia		York	14,000
Virginia	458,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane De#1 Debris Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Population Model

Landfall Plus About 12 Hours

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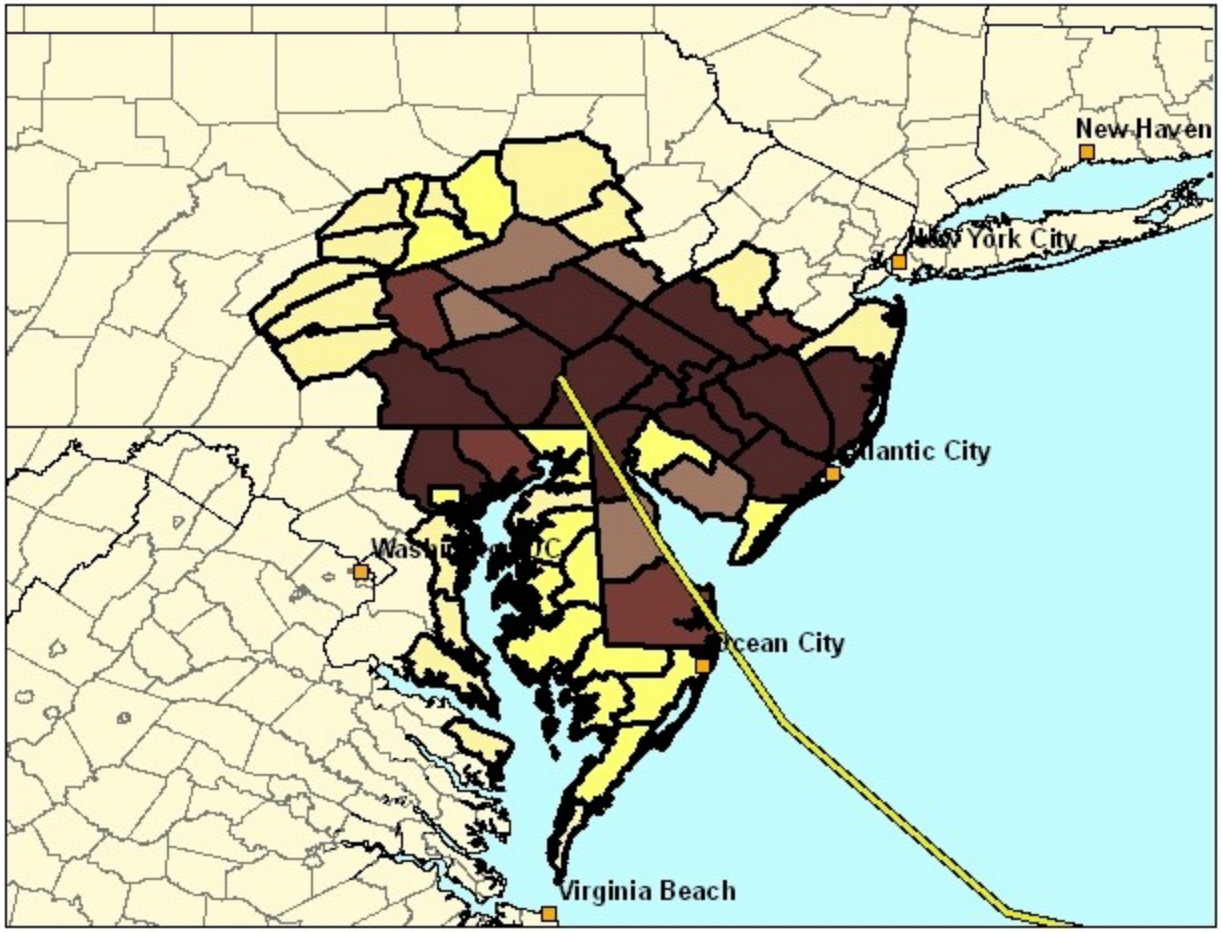

Post Landfall Population Model Results

Pennsylvania - 5,880,000
New Jersey - 2,622,000
Maryland - 1,172,000
Delaware - 856,000
Virginia - 52,000

Model results per County on following page

This model is based on a Category 3 storm making landfall in Delaware Bay area.

Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 3 storm making landfall in Delaware Bay area. These projections are based on information from the NHC (1000 EDT 09/16/2007) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Population Model	
Generated By: Siemsen, LRL 1030 EDT 09/16/2007	
Sources: HURREVAC LRL-DEBRIS	Page 4 of 18

US Army Corps of Engineers

Hurricane De#1 Population Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Population per State	County	Population per County
Delaware		Kent	148,000
		New Castle	527,000
		Sussex	181,000
Delaware	856,000		
Maryland		Anne Arundel	24,000
		Baltimore	374,000
		Baltimore City	93,000
		Calvert	< 1,000
		Caroline	33,000
		Cecil	100,000
		Dorchester	32,000
		Harford	242,000
		Kent	20,000
		Queen Annes	47,000
		Somerset	26,000
		St Marys	2,000
		Talbot	37,000
		Wicomico	93,000
		Worcester	49,000
Maryland	1,172,000		
New Jersey		Atlantic	272,000
		Burlington	451,000
		Camden	518,000
		Cape May	98,000
		Cumberland	155,000
		Gloucester	283,000
		Hunterdon	< 1,000
		Mercer	238,000
		Monmouth	13,000

State	Population per State	County	Population per County
New Jersey		Ocean	527,000
(continued)		Salem	67,000
New Jersey	2,622,000		
Pennsylvania		Berks	400,000
		Bucks	603,000
		Carbon	5,000
		Chester	482,000
		Columbia	34,000
		Cumberland	14,000
		Dauphin	246,000
		Delaware	557,000
		Juniata	< 1,000
		Lancaster	496,000
		Lebanon	128,000
		Lehigh	145,000
		Luzerne	2,000
		Montgomery	776,000
		Montour	15,000
		Northumberland	71,000
		Perry	< 1,000
		Philadelphia	1,453,000
		Schuylkill	145,000
		Snyder	16,000
		Union	< 1,000
		York	292,000
Pennsylvania	5,880,000		
Virginia		Accomack	40,000

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane De#1 Population Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Population Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Population per State	County	Population per County
Virginia		Northampton	9,000
(continued)		Northumberland	3,000
Virginia	52,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Population Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

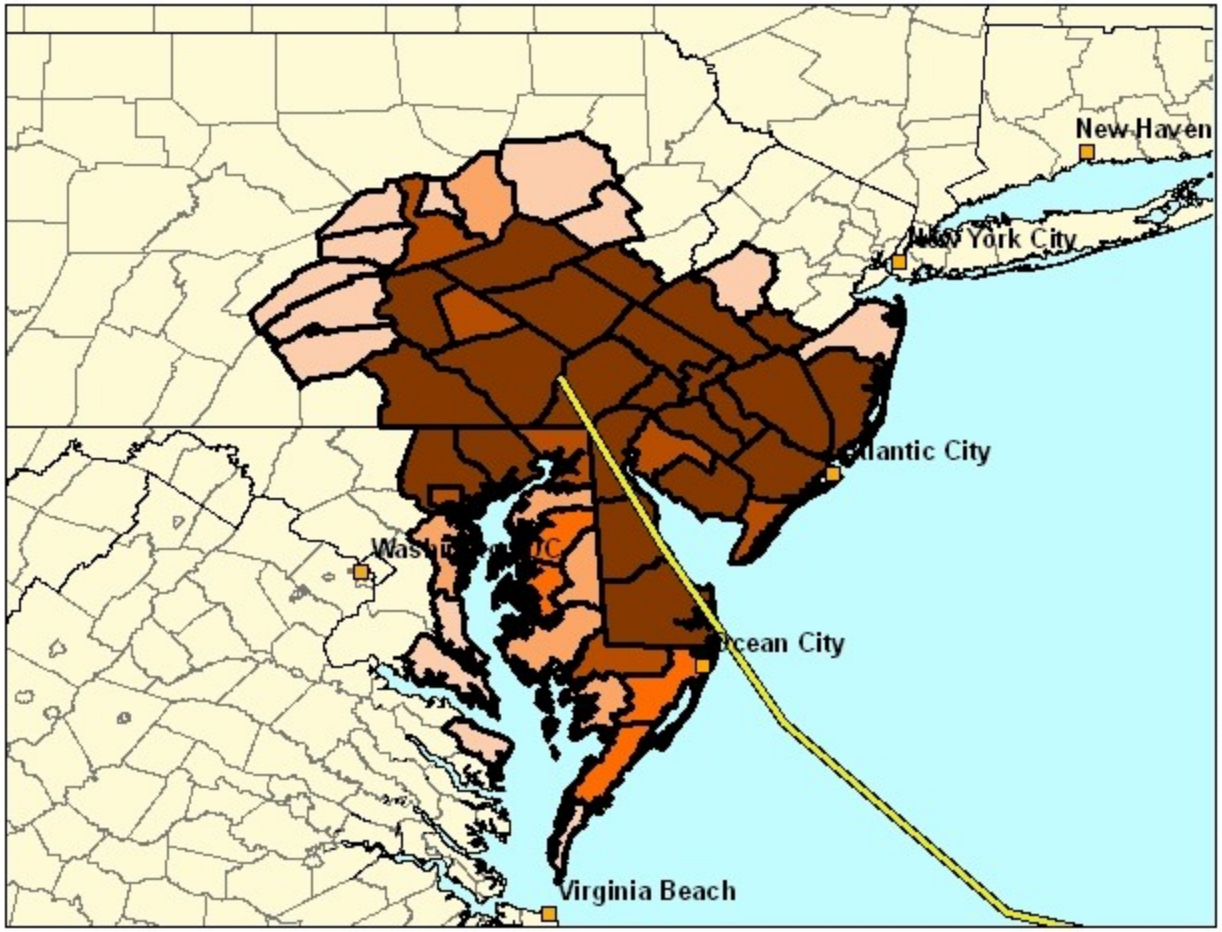
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Households Model

Landfall Plus About 12 Hours

For Official Use Only!



Post Landfall Households Model Results

Pennsylvania - 2,244,000
New Jersey - 976,000
Maryland - 457,000
Delaware - 328,000
Virginia - 22,000

Model results per County on following page

This model is based on a Category 3 storm making landfall in Delaware Bay area.

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 3 storm making landfall in Delaware Bay area. These projections are based on information from the NHC (1000 EDT 09/16/2007) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Households Model	
Generated By: Siemsen, LRL 1030 EDT 09/16/2007	
Sources: HURREVAC LRL-DEBRIS	

US Army Corps of Engineers

Hurricane De#1 Households Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Households per State	County	Households per County
Delaware		Kent	56,000
		New Castle	199,000
		Sussex	73,000
Delaware	328,000		
Maryland		Anne Arundel	9,000
		Baltimore	150,000
		Baltimore City	38,000
		Calvert	< 1,000
		Caroline	13,000
		Cecil	37,000
		Dorchester	14,000
		Harford	88,000
		Kent	8,000
		Queen Annes	18,000
		Somerset	9,000
		St Marys	< 1,000
		Talbot	16,000
		Wicomico	36,000
		Worcester	21,000
Maryland	457,000		
New Jersey		Atlantic	103,000
		Burlington	165,000
		Camden	189,000
		Cape May	41,000
		Cumberland	52,000
		Gloucester	101,000
		Hunterdon	< 1,000
		Mercer	87,000
		Monmouth	4,000

State	Households per State	County	Households per County
New Jersey		Ocean	208,000
(continued)		Salem	26,000
New Jersey	976,000		
Pennsylvania		Berks	152,000
		Bucks	221,000
		Carbon	2,000
		Chester	176,000
		Columbia	13,000
		Cumberland	7,000
		Dauphin	100,000
		Delaware	209,000
		Juniata	< 1,000
		Lancaster	182,000
		Lebanon	50,000
		Lehigh	56,000
		Luzerne	< 1,000
		Montgomery	296,000
		Montour	6,000
		Northumberland	30,000
		Perry	< 1,000
		Philadelphia	565,000
		Schuylkill	59,000
		Snyder	6,000
		Union	< 1,000
		York	114,000
Pennsylvania	2,244,000		
Virginia		Accomack	16,000

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Households Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Households Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Households per State	County	Households per County
Virginia		Northampton	4,000
(continued)		Northumberland	2,000
Virginia	22,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Households Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Commodities Model

Landfall Plus About 12 Hours

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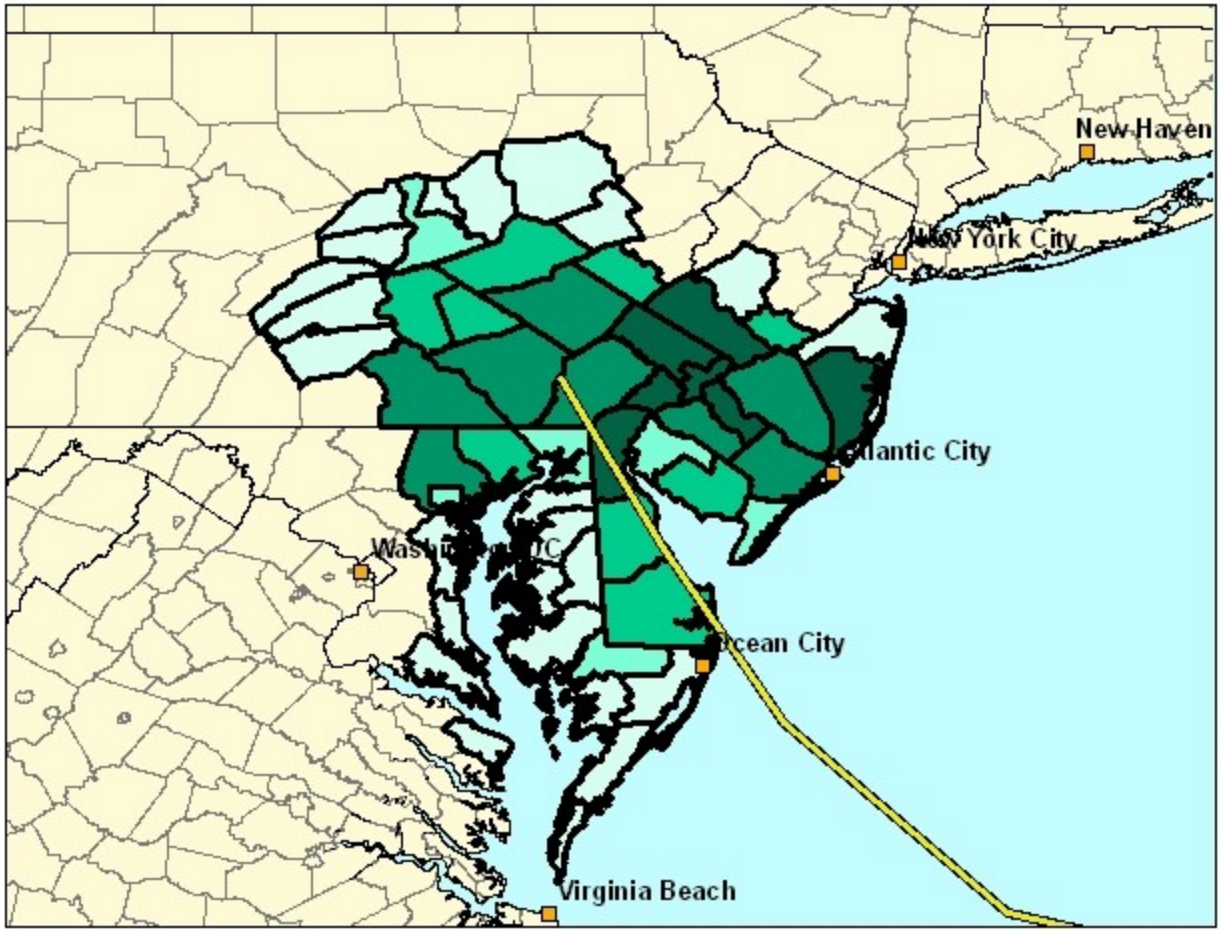

Post Landfall Ice/Water Model Results

Day One / Day Two / Day Three

PA – 121/242/484 Truckloads
NJ – 54/108/215 Truckloads
MD – 25/50/100 Truckloads
DE – 18/35/70 Truckloads
VA – 2/3/6 Truckloads

Model results per County on following page

This model is based on a Category 3 storm making landfall in Delaware Bay area.

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 3 storm making landfall in Delaware Bay area. These projections are based on information from the NHC ***(1000 EDT 09/16/2007)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Commodities Model	
Generated By: Siemsen, LRL 1030 EDT 09/16/2007	
Sources: HURREVAC LRL-DEBRIS	Page 10 of 18

US Army Corps of Engineers

Hurricane De#1 Commodities Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Truckloads per State	County	Truckloads per County
Delaware		Kent	12
		New Castle	43
		Sussex	15
Delaware	70		
Maryland		Anne Arundel	2
		Baltimore	30
		Baltimore City	8
		Calvert	1
		Caroline	3
		Cecil	8
		Dorchester	3
		Harford	20
		Kent	2
		Queen Annes	4
		Somerset	3
		St Marys	1
		Talbot	3
		Wicomico	8
		Worcester	4
Maryland	100		
New Jersey		Atlantic	22
		Burlington	37
		Camden	42
		Cape May	8
		Cumberland	13
		Gloucester	23
		Hunterdon	1
		Mercer	19
		Monmouth	1

State	Truckloads per State	County	Truckloads per County
New Jersey		Ocean	43
(continued)		Salem	6
New Jersey	215		
Pennsylvania		Berks	32
		Bucks	49
		Carbon	1
		Chester	39
		Columbia	3
		Cumberland	2
		Dauphin	20
		Delaware	45
		Juniata	1
		Lancaster	40
		Lebanon	11
		Lehigh	12
		Luzerne	1
		Montgomery	63
		Montour	2
		Northumberland	6
		Perry	1
		Philadelphia	117
		Schuylkill	12
		Snyder	2
		Union	1
		York	24
Pennsylvania	484		
Virginia		Accomack	4

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Commodities Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Commodities Model

Landfall Plus About 12 Hours

For Official Use Only!

State	Truckloads per State	County	Truckloads per County
Virginia		Northampton	1
(continued)		Northumberland	1
Virginia	6		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Commodities Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Temporary Housing Model

Landfall Plus About 12 Hours

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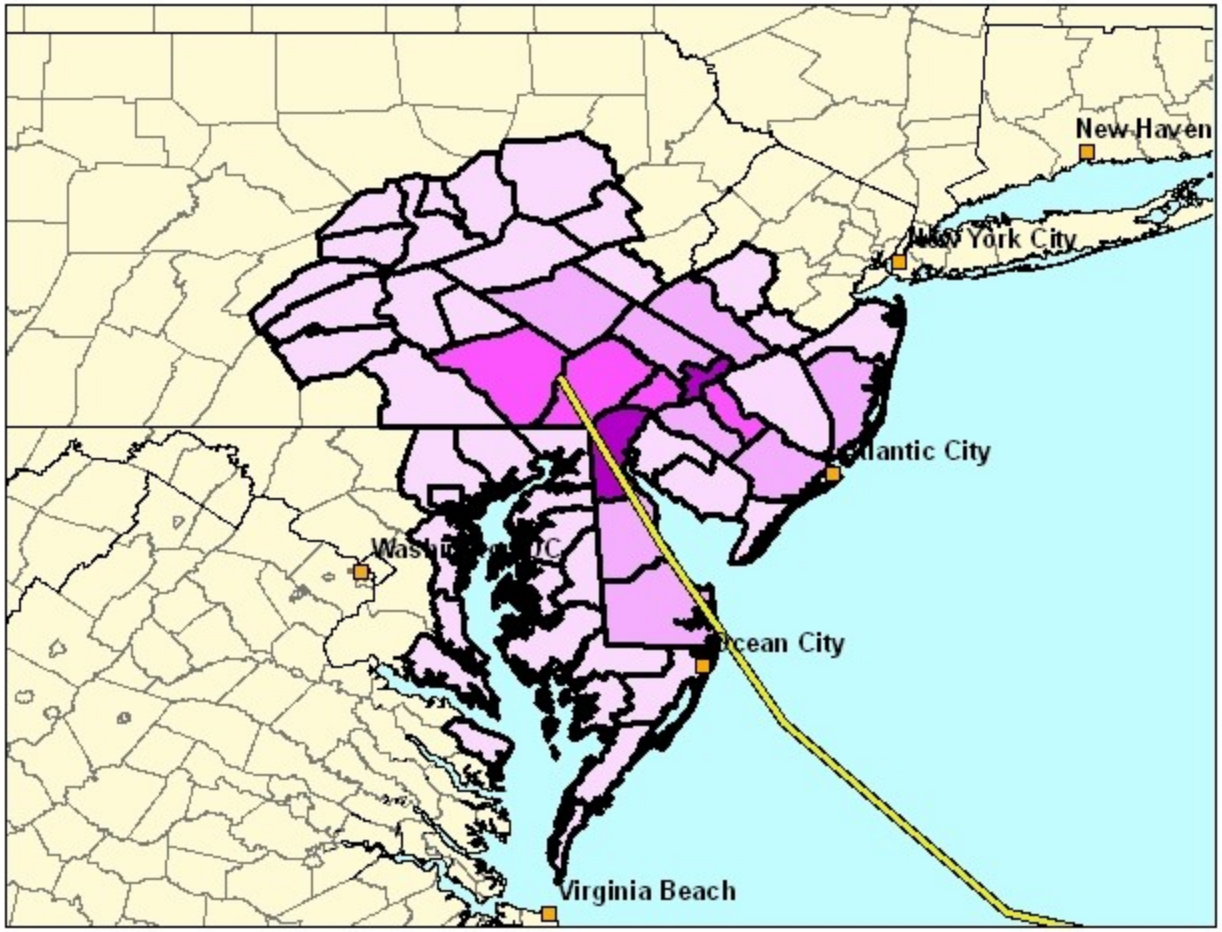

Post Landfall Temporary Housing Model Results

Pennsylvania - 37,700
New Jersey - 20,000
Delaware - 13,900
Maryland - 8,500
Virginia - 400

Model results per County on following page

This model is based on a Category 3 storm making landfall in Delaware Bay area.

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall in Delaware Bay area. These projections are based on information from the NHC (1000 EDT 09/16/2007) forecast. Temporary housing is based on 1% in CAT 1, 3% in CAT 2 and 5% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Housing Model	
Generated By: Siemsen, LRL 1030 EDT 09/16/2007	
Sources: HURREVAC LRL-DEBRIS	Page 13 of 18

US Army Corps of Engineers

Hurricane De#1 Temporary Housing Model

Landfall Plus About 12 Hours

For Official Use Only!

State	House Units per State	County	House Units per County
Delaware		Kent	2,700
		New Castle	8,000
		Sussex	3,200
Delaware	13,900		
Maryland		Anne Arundel	< 100
		Baltimore	1,500
		Baltimore City	400
		Calvert	< 100
		Caroline	400
		Cecil	1,400
		Dorchester	200
		Harford	1,400
		Kent	300
		Queen Annes	300
		Somerset	300
		St Marys	< 100
		Talbot	200
		Wicomico	1,100
		Worcester	1,000
Maryland	8,500		
New Jersey		Atlantic	3,100
		Burlington	1,800
		Camden	4,700
		Cape May	1,700
		Cumberland	1,700
		Gloucester	3,100
		Hunterdon	< 100
		Mercer	900
		Monmouth	< 100

State	House Units per State	County	House Units per County
New Jersey		Ocean	2,100
(continued)		Salem	900
New Jersey	20,000		
Pennsylvania		Berks	3,600
		Bucks	2,300
		Carbon	< 100
		Chester	4,700
		Columbia	200
		Cumberland	< 100
		Dauphin	1,100
		Delaware	5,800
		Juniata	< 100
		Lancaster	4,900
		Lebanon	1,300
		Lehigh	600
		Luzerne	< 100
		Montgomery	3,000
		Montour	< 100
		Northumberland	300
		Perry	< 100
		Philadelphia	7,800
		Schuylkill	900
		Snyder	< 100
		Union	< 100
		York	1,200
Pennsylvania	37,700		
Virginia		Accomack	400

Temporary housing is based on 1% in CAT 1, 3% in CAT 2 and 5% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Housing Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Temporary Housing Model

Landfall Plus About 12 Hours

For Official Use Only!

State	House Units per State	County	House Units per County
Virginia		Northampton	< 100
(continued)		Northumberland	< 100
Virginia	400		

Temporary housing is based on 1% in CAT 1, 3% in CAT 2 and 5% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Housing Model

Generated By:
Siemsen, LRL 1030 EDT 09/16/2007

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane De#1 Temporary Roofing Model

Landfall Plus About 12 Hours

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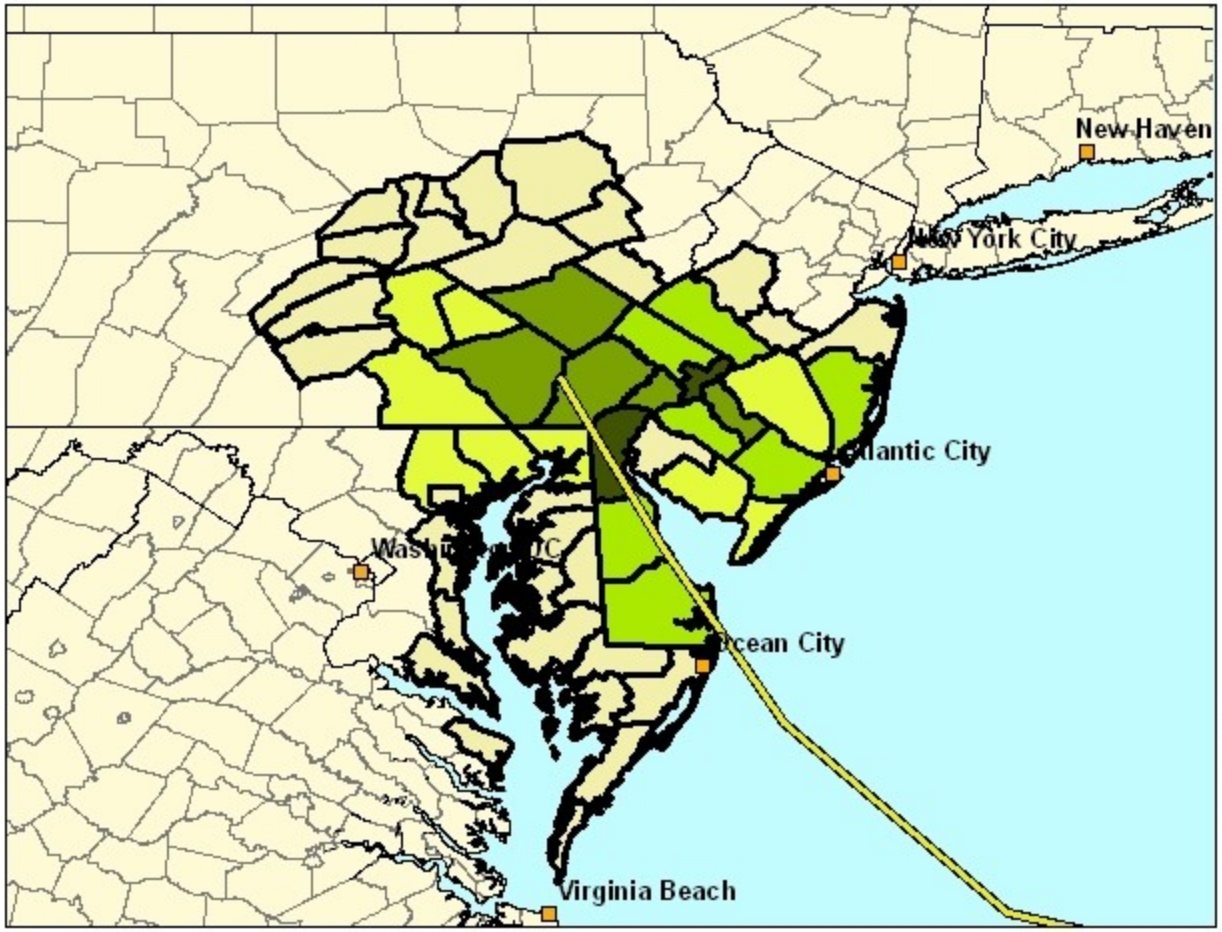

Post Landfall Temporary Roofing Model Results

Pennsylvania - 67,800
New Jersey - 34,900
Delaware - 22,300
Maryland - 14,900
Virginia - 600

Model results per County on following page

This model is based on a Category 3 storm making landfall in Delaware Bay area.

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall in Delaware Bay area. These projections are based on information from the NHC (1000 EDT 09/16/2007) forecast. Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 8% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane De#1 Roofing Model	
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Sources: HURREVAC LRL-DEBRIS	Page 16 of 18

US Army Corps of Engineers

Hurricane De#1 Temporary Roofing Model

Landfall Plus About 12 Hours

For Official Use Only!

State	House Units per State	County	House Units per County
Delaware		Kent	4,300
		New Castle	12,900
		Sussex	5,100
Delaware	22,300		
Maryland		Anne Arundel	200
		Baltimore	3,000
		Baltimore City	800
		Calvert	< 100
		Caroline	600
		Cecil	2,300
		Dorchester	400
		Harford	2,500
		Kent	400
		Queen Annes	600
		Somerset	400
		St Marys	< 100
		Talbot	400
		Wicomico	1,800
		Worcester	1,500
Maryland	14,900		
New Jersey		Atlantic	5,200
		Burlington	3,500
		Camden	8,000
		Cape May	2,800
		Cumberland	2,800
		Gloucester	5,100
		Hunterdon	< 100
		Mercer	1,800
		Monmouth	< 100

State	House Units per State	County	House Units per County
New Jersey		Ocean	4,200
(continued)		Salem	1,500
New Jersey	34,900		
Pennsylvania		Berks	6,100
		Bucks	4,500
		Carbon	< 100
		Chester	8,000
		Columbia	300
		Cumberland	200
		Dauphin	2,100
		Delaware	9,700
		Juniata	< 100
		Lancaster	8,200
		Lebanon	2,200
		Lehigh	1,200
		Luzerne	< 100
		Montgomery	6,000
		Montour	200
		Northumberland	600
		Perry	< 100
		Philadelphia	14,400
		Schuylkill	1,600
		Snyder	200
		Union	< 100
		York	2,300
Pennsylvania	67,800		
Virginia		Accomack	600

Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 8% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Landfall Plus About 12 Hours

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State	House Units per State	County	House Units per County
Virginia		Northampton	< 100
(continued)		Northumberland	< 100
Virginia	600		

Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 8% in CAT 3.

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